

## CLAIMS

- 1        1. A mogul cylinder assembly comprising:
- 2            a lock housing mogul having a front surface and having a cylinder bore having a  
3            principal axis and an inner surface disposed therein, a first driver pin bore extending radially  
4            from the principal axis of the cylinder bore, and a second driver pin bore extending radially  
5            from the principal axis of the cylinder bore and not parallel to the first pin bore;
- 6            a cylinder blank disposed within the cylinder bore and having a principal axis aligned  
7            to the principal axis of the lock housing mogul, a first pass key pin bore aligned to the first  
8            driver pin bore of the lock housing mogul, and a second pass key pin bore aligned to the  
9            second driver pin bore of the lock housing mogul;
- 10          a first driver pin disposed within the first driver pin bore;
- 11          a first pass key pin disposed within the first pass key pin bore;
- 12          a second driver pin disposed within the second driver pin bore; and
- 13          a second pass key pin disposed within the second pass key pin bore.

2. The mogul cylinder assembly of claim 1 wherein the first and second driver pin bores are disposed orthogonal to the principal axis of the cylinder bore and are disposed 90 degrees to one another radially about the principal axis of the cylinder bore.

1           3. The mogul cylinder assembly of claim 1 further comprising a third driver pin  
2         bore extending radially from the principal axis of the cylinder bore and not parallel to either  
3         the first driver pin bore or second driver pin bore.

1           4. The mogul cylinder assembly of claim 3 wherein the first, second, and third  
2         driver pin bores are disposed orthogonal to the principal axis of the cylinder bore, and the  
3         first and third driver pin bores are disposed 90 degrees to the second driver pin bore radially  
4         about the principal axis of the cylinder bore.

1           5. The mogul cylinder assembly of claim 1 further comprising a third driver pin  
2         bore extending radially from the principal axis of the cylinder bore and parallel to the first  
3         driver pin bore.

1           6. The mogul cylinder assembly of claim 5 wherein the third driver pin bore  
2         extends in the same direction as the first driver pin bore.

1           7. The mogul cylinder assembly of claim 1 further comprising a shielding device  
2         disposed between the first driver pin bore and the front surface of the lock housing mogul.

8. A mogul cylinder assembly comprising:

1        a lock housing mogul having a front surface and having a cylinder bore having a  
2        principal axis and an inner surface disposed therein, a first set of driver pin bores aligned  
3        with a first driver pin plane extending radially from the principal axis of the cylinder bore, a  
4        second set of one or more driver pin bores extending radially from the principal axis of the  
5        cylinder bore and not parallel to any of the pin bores in the first set of pin bores or the first  
6        plane;

7        a cylinder blank disposed within the cylinder bore and having a principal axis aligned  
8        to the principal axis of the lock housing mogul, a first set of pass key pin bores each aligned  
9        to one of the driver pin bores in the first set of driver pin bores of the lock housing mogul,  
10      and a second set of pass key pin bores each aligned to a driver pin bore in the second set of  
11      one or more driver pin bores in the lock housing mogul;

12      a first set of driver pins, each disposed within one of the driver pin bores in the first  
13      set of driver pin bores;

14      a first set of pass key pins, each disposed within one of the pass key pin bores in the  
15      first set of pass key pin bores;

16      a second set of one or more driver pins, each disposed within the second set of driver  
17      pin bores; and

18      a second set of one or more pass key pins, each disposed within the second set of pass  
19      key pin bores.

9. The mogul cylinder assembly of claim 8 wherein the first set of driver pin bores is aligned with a first plane passing through the principal axis of the cylinder bore and at least one of the bores in the second set of driver pin bores is disposed 90 degrees to the first plane radially about the principal axis of the cylinder bore.

1 10. The mogul cylinder assembly of claim 8 further comprising a third set of one  
2 or more driver pin bores aligned with a third plane extending radially from the principal axis  
3 of the cylinder bore and not parallel to either the first plane or any of the bores in the second  
4 set of driver pin bores.

1 11. The mogul cylinder assembly of claim 10 wherein the first and third planes  
2 are aligned with the principal axis of the cylinder bore, and the first and third planes are  
3 disposed to either side of one of the bores in the second set of driver pin bores radially about  
4 the principal axis of the cylinder bore by the same angle.

1 12. The mogul cylinder assembly of claim 8 further comprising a hardened  
2 shielding device disposed between the first set of driver pin bores and the front surface of the  
3 lock housing mogul.

13. The mogul cylinder assembly of claim 8 further comprising a hardened  
shielding device disposed between the first set of pass key pin bores and the front surface of  
the cylinder blank.

14. The mogul cylinder assembly of claim 8 further comprising one or more hardened shielding devices disposed between the first and second sets of driver pin bores and the front surface of the lock housing mogul and one or more hardened shielding devices disposed between the first and second sets of pass key pin bores and the front surface of the cylinder blank.

15. A mogul cylinder assembly comprising:

1        a lock housing mogul having a front surface and having a cylinder bore having a  
2        principal axis and an inner surface disposed therein,

3                a first set of driver pin bores aligned with a first driver pin plane extending  
4        radially from the principal axis of the cylinder bore,

5                a second set of one or more driver pin bores aligned with a second driver pin  
6        plane extending radially from the principal axis of the cylinder bore, and

7                a third set of one or more driver pin bores aligned with a third driver pin plane  
8        extending radially from the principal axis of the cylinder bore;

9        a cylinder blank disposed within the cylinder bore and having

10                a principal axis aligned to the principal axis of the lock housing mogul,

11                a first set of pass key pin bores each aligned to one of the driver pin bores in  
12        the first set of driver pin bores of the lock housing mogul,

13                a second set of pass key pin bores each aligned to one of the driver pin bores  
14        in the second set of driver pin bores of the lock housing mogul, and

15                a third set of pass key pin bores each aligned to one of the driver pin bores in  
16        the third set of driver pin bores of the lock housing mogul;

17        a first set of driver pins, each disposed within one of the driver pin bores in the first  
18        set of driver pin bores;

19                a first set of pass key pins, each disposed within one of the pass key pins in the first  
20        set of pass key pin bores;

21                a second set of driver pins, each disposed within one of the driver pin bores in the  
22        second set of driver pin bores;

23        a second set of pass key pins, each disposed within one of the pass key pins in the  
24    second set of pass key pin bores;  
25        a third set of driver pins, each disposed within one of the driver pin bores in the third  
26    set of driver pin bores; and  
27        a third set of pass key pins, each disposed within one of the pass key pins in the third  
28    set of pass key pin bores.

16. The mogul cylinder assembly of claim 15 further comprising a hardened shielding device disposed between the first set of driver pin bores and the front surface of the lock housing mogul.

1 17. The mogul cylinder assembly of claim 15 further comprising a hardened  
2 shielding device disposed between the first set of pass key pin bores and the front surface of  
3 the cylinder blank.

1 18. The mogul cylinder assembly of claim 15 further comprising one or more  
2 hardened shielding devices disposed between the first and second sets of driver pin bores and  
3 the front surface of the lock housing mogul and one or more hardened shielding devices  
4 disposed between the first and second sets of pass key pin bores and the front surface of the  
5 cylinder blank.

1 19. The mogul cylinder assembly of claim 15 wherein the first, second, and third  
2 sets of pass key pins are protected by a hardened cylinder shield disposed between the pass  
3 key pin bores and the front surface of the cylinder blank.

1 20. The mogul cylinder assembly of claim 15 wherein each of the first, second,  
2 and third sets of driver pins are protected by one or more hardened dowel pins disposed  
3 between the driver pin bores and the front surface of the lock housing mogul.